Fig. 66 Maltese Islands: Main Infectious Diseases.

Fig. 67 Bakeries.

1: Bowen-Jones et al. K-5 (1955-1958) 1961
EZ6 Malta EZ6

low levels. Earlier improvements probably supplied the basis for change but more important was the fact that, for the first time, the effective Garrison of Malta included the whole population. The new machinery for public information, the desperate need for reducing disease incidence and preventing epidemics, and even food rationing and shortage had cumulatively beneficial effects on the public mind. More than all, it would seem, the military control of the besieged islands with its conscription of many Maltese males and the increased contact of British troops with the people, together with that strange uniting exaltation in face of danger observed in other countries, all shocked Malta into new ways of thought (Fig. 66).

After the war this momentum was maintained during the period of reconstruction. The Malta Memorial District Nursing Association, Child Health Clinics, and U.N.-established ante-natal clinics have now been accepted and their services utilised. In 1959 the infantile mortality rate was 34.7 per 1,000, leaving the memory of the rate of 350 per 1,000 in 1942 far behind.

This revolutionary change is of particular revelance to this study. Many of its implications need no labouring. The demographic consequences, for instance, are obvious enough, as also the slowness with which traditional ways of life in Malta have changed. For us the most important consequence is that rising generations through a new awareness of causation and consequence, of scientific processes, are becoming vulnerable to new ideas in associated fields. There are no great steps between preventive human medicine, inoculation, livestock injections and an appreciation of plant pathology. One difficulty remains; the rural areas are the least affected by these recent changes and those individuals in the countryside who are mentally injected with new ideas and understanding are, for various reasons, the least likely to remain in agriculture.

Exemplifying this continuing regional dichotomy, but unity in complexity, is the recent history of milk consumption and production (13). Traditionally in Malta, 'the entire milk supply has been delivered by the goat herself' (14). Sometimes living with their flocks in the *fossa* which surround Valletta, the herdsmen would wander the streets, milking the animals on demand. Bruce and Zammit in 1885 and 1905 showed that the bacillus of Undulant or Malta Fever was freely excreted in goats milk and that the high incidence in Malta of this debilitating, sometimes lethal, disease was a natural consequence of the general albeit low per capita consumption of fresh milk from predominantly diseased goats. After considerable investigation, a milk pasteurising plant was erected and the first pasteurised milk was distributed, Valletta, Floriana and Sliema being declared 'closed areas' within which the sale of raw milk became illegal. During World War II, further extension of this policy was prevented but, since most goats were slaughtered for meat because of fodder shortage and because consumption of tinned milk became normal, the incidence of Malta fever fell to record low levels. Post-war revival in goats' milk production resulted in general re-infection by brucellosis and in 1948 the incidence of undulant fever was the highest ever recorded. During the post-war period public health and welfare policies have encouraged the consumption of milk. Because of the incidence of Malta fever, this has entailed the provision of expensive pasteurising plant, the prevention of the sale of unpasteurised, and the official encouragement of production of cows' rather than goats' milk.

This particular development is examined at greater length in Chapter X but some main points of general import merit consideration here. First, Maltese society has recently been affected by social, dietetic and medical policies which profoundly affect the basis of social life. In general one might say that the Maltese way of life is being made more remote from the simple crudities of parochial experience. Secondly, in the field of health and social welfare, the criterion of scientifically measured need has been adopted as the basis of official policy and the question of availability of resources is regarded as of secondary importance. Thirdly, this increasing social sophistication has only very recently become operative in Maltese life and different scales of value exist in different generations and in different social groups. Lastly, it would be fair to say that, while the urban markets are still only relatively fastidious

3: Buxton D-5 (1920-1921) 1922 EZ6 Malta EZ6

those from the Mediæval hospital certainly suggest that those authorities who maintain that the hospital probably contained, amongst others, the bones of people from Western Europe are possibly in error. We should in that case have expected to find a high degree of variation. We do not do so. It may well be argued that the modern crania are too few to base any satisfactory arguments on, and we fully admit that it is unwise to argue from a series that never exceeds 42, and in some cases falls as low as 29. It would appear, however, that the modern series, of the majority of which the provenance was fairly exactly known, is consistently more variable than the Mediæval series from the Chapel of Bones. It would certainly be worth while to make a series of measurements on about 100 modern crania to see whether this statement really represents the truth.

Except in a few cases, it was impossible to associate mandibles with the crania to which they belonged, and unfortunately at the time when measurements were made on modern crania few mandibles could be discovered. The only series, therefore, of mandibles which could be treated statistically are those Mediæval specimen from the Chapel of Bones. Even in this case it was not found possible to get a series as large as 300 for every measurement. The majority of these, and probably all, are male; any doubtful cases having been rejected. The Neolithic and Romano-British mandibles are also probably male. The Bronze Age mandibles appeared from the associated bones to be female, but the condition of the latter was such that a definite opinion could not be expressed. In general terms there are certain marked differences between the mandibles from Hal Saflieni and elsewhere, whereas the Romano-Maltese and the Mediæval mandibles, although differing in detail, present a general similarity. The coronoid height and the condyloid height of the Neolithic mandibles are both lower, the ramus being of about the same breadth. The condylo-symphysial breadth is about the same. The Mediæval mandibles have a slightly lower ascending ramus than the Romano-Maltese, but the former are slightly more stoutly built; the mandibular index is quite possibly about the same. Generalising, we may say that the Neolithic mandibles belong to a type with a rather short, broad ascending ramus, and a shallow sigmoid notch, whereas the Mediæval mandibles have the higher ascending ramus and the deeper sigmoid notch which are usually associated with various branches of the Alpine race.

A collection of teeth was made from the bone heaps at Hal Saflieni.[1] Unfortunately no teeth of more recent date are available. Out of a total of 224 adult teeth from Hal Saflieni (Malta Local Neolithic), 15 upper incisors and canines showed a marked edge-to-edge bite. Caries occurred in 19 cases; there was a complete erosion of the roots in 2. One incisor had two roots. Speaking generally, the teeth

[1] I am indebted to my brother, Mr. J. L. Dudley Buxton, for examining and reporting on these teeth from the point of view of a dental surgeon.

3: Buxton D-5 (1920-1921) 1922 EZ6 Malta EZ6

did not differ from a chance collection of modern civilized teeth, except that caries was less common.

Teeth from Hypogæum, Hal Saflieni (Malta Local Neolithic).

	1 Normal Teeth.	2 Carious Teeth.	3 Teeth showing Marked Attrition of Edge-to-edge Form.	4 Teeth showing Marked Attrition.	5 Total Adult Teeth.	6 Deciduous Teeth.
Molars	21	10	—	18	48	3
Premolars	26	6	—	36	62	—
Canines	9	—	7	15	31	2
Upper incisors ...	23	1	8	23	54	—
Lower incisors ...	2	2	—	27	29	—
Total ...	81	19	15	119	224	5

Teeth included in Column 2 may also be included in Columns 3 or 4; Columns 3 and 4 are mutually exclusive.

Summing up, the general characters of the Maltese skulls at our disposal, the physical type conveniently termed "Malta first race" is associated culturally with the Malta Local Neolithic. Skulls of this type are long, narrow, and slightly built. They have low orbits, narrow zygomatic arches, and a jaw which, though often not absolutely large, has a low ascending ramus, a shallow sigmoid, and considerable breadth in the antero-posterior diameter. They appear to be representatives of the Mediterranean race.

The skulls of succeeding periods, conveniently termed "Malta second race," and associated with numerous cultural periods, are, as a general rule, shorter, broader, more stoutly built, larger, and have higher orbits. The ascending ramus of the jaw is high, and the antero-posterior diameter is small. Although among a large collection of these crania single specimens exhibit the characteristics of the Mediterranean type, and some even occur with features which are usually considered to be typical of the Nordic race, the majority, in addition to the features already mentioned, show that peculiar contour in the occipital region which is usually associated with the type called by Von Luschan "Armenoid."

Living Material.

Apart from those questions which have already been discussed when dealing with the general anthropology of Malta, special problems are connected with the living. In the first place, the sex and birthplace are definitely known, and the age, at least approximately. Secondly, the numbers are usually greater. Thirdly,

4: Cassar P-4, 5 (no date) 1964 EZ6 Malta EZ6

body include faces, eyes, ears, upper limbs, hands, trunks, female breasts, hearts, thighs, legs, and feet (Plate 1, Fig. 1). Although they show no deformities and no pathology they indicate the part affected by illness and healed by divine intercession. Thus 'legs were offered for paralysis, congenital anomalies and chronic ulcers in the lower limbs; 'arms' and 'hands' for fractures and threatened loss of fingers by injury or gangrene; 'ears' for deafness and otitis; and 'eyes' for a variety of ocular diseases. Sometimes, however, the association of illness and anatomical part is not so specific; thus 'trunks' were offered for such varied conditions as throat affections, hernias, and mental disorder; 'faces' for enlarged glands in the neck; and pairs of female 'breasts' for deficiency of milk in a lactating mother as well as disease of these organs.

They were made of wax or of raised work in gold and silver foil. Those met with at present are the silver ones, the others having disappeared from the churches though they were still being offered at the end of the last century if not later. There are records of wax effigies of arms, legs, eyes, and babies and also of gold ones having been deposited at that period at Ta Pinu Church at Gharb in Gozo. A pair of gold legs cost £17 (*Id-devot ta Maria* 1890; Kerr 1893). Wax figures also existed until some thirty years ago in the small church of Tal Mirakli at Lija (Tanti 1962). These objects were manufactured in Malta but some of them were imported from Sicily and North Africa. The gold and silver foil was hammered into the desired shape over dies of bronze by a silversmith (Plate 1, Fig. 3). They vary in size from 6 by 2½ inches to 1 by 3½ inches. Some of them bear hall-marks which help to date them and identify the source of manufacture. The earliest met so far by the writer is a stylized silver model (in the writer's collection) of a pair of female breasts impressed with the hall-marks of the Grand Master of the Order of St. John of Jerusalem, Em. de Rohan who ruled over the Maltese Islands from 1775 to 1797.

The deposition of anatomical 'ex-votos' in Maltese churches ceased in 1935. The ecclesiastical council held in that year in Malta under the presidency of Cardinal H. Lepicier disallowed the exhibition of 'votive offerings showing parts of the human body except those in the shape of a heart', (*Concilium*, 1935, p. 60), so that the present-day visitor will hardly see anything else except 'hearts' hanging by the statues of the saints to whom they were offered by grateful devotees. The more 'profane' models have been melted and converted into sacred utensils for the church service.

Very occasionally instead of an anatomical representation, we come across a silver tablet commemorating deliverance from illness. Here is a specimen inscribed in Latin:

P. Trapani cum suis / A. MDCCCLXXXVII / Ab Asiana Lue / Incolumes (*Id-devot ta Maria*, 1888).

that is P. Trapani and his family spared from the Asiatic Disease of the year 1887.

(The Asiatic Disease was cholera of which Malta had seven outbreaks during the last century. The 1887 epidemic lasted three and a half months and had a mortality of over 50 per cent.)

Quite often the making of a vow was accompanied by the recitation of prayers and by touching the diseased part with some object associated with the healing saint. These actions include the smearing of the part, in the form of a cross, with oil obtained from the sanctuary lamp; touching the part with a sacred image or medal; sipping water in which rose-petals from the altar, dedicated to the saint or Virgin, had been immersed;